

## **REMARKS**

### ***Status of Claims***

Claims 1 through 13, in their form as submitted in Applicants' reply of December 30, 2005, are pending before the Examiner.

### ***Claim Rejections – 35 U.S.C. § 102***

Claims 1, 2, 3, 5 and 9-13; Ito et al. '763

Claims 1, 2, 3, 5, and 9-13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Pat. No. 6,465,763 to Ito et al.

Applicants note that a ceramic susceptor substrate as recited in independent claim 1 is

*processed so that* when the susceptor is not heating, along the susceptor thickness the difference between [the maximum and minimum outer diameters] *in an arbitrary plane* is 0.8% or less of the average outer diameter along the susceptor wafer-support side.

(Emphasis added.) It is noted that the claim 1 recitation "in an arbitrary plane" should be taken to mean *in any plane whatsoever, taken at any angle whatsoever*, through the susceptor substrate. Yet in making the outstanding rejections, the Office has neglected to address this issue. That is, it is respectfully submitted that the Office has failed to make a *prima facie* case that the disclosure of Ito et al. anticipates a susceptor substrate, as recited in claim 1 of the present application, processed such that the difference between the maximum and minimum outer diameters *in any arbitrary plane slicing through the thickness of the substrate at any angle whatsoever* is 0.8% or less of the average outer diameter along the susceptor wafer-support side.

Appended to the November 3, 2006 advisory action are reasons given as to why Applicants' requested reconsideration based on their remarks in their reply of October 16, 2006 does not place this application in condition for allowance. Those reasons flatly state, "[T]he diameter of Ito as [dis]closed has [a] zero difference, [between the maximum and minimum outer diameters], which meets the recited range of 0.8% or less." Yet the only mention concerning susceptor diameter that the Ito et al. reference makes is in Examples 1 and 8, which commonly state that a processed aluminum nitride plate "was cut out into a disk having a diameter of 210 mm" and the side of the disk "was subjected to sand blasting with alumina having an average particle diameter of 5  $\mu\text{m}$ " to produce a ceramic substrate having surface roughness " $R_{\text{max}}$  of 7  $\mu\text{m}$ ."

It is respectfully submitted that the Office has not made a *prima facie* demonstration of how, technically, the Ito et al. disclosure as just quoted anticipates Applicant's claimed susceptor substrate processed such that the difference between the maximum and minimum outer diameters *in any arbitrary plane slicing through the thickness of the substrate at any angle whatsoever* is 0.8% or less of the average outer diameter along the susceptor wafer-support side.

Furthermore, it is respectfully also submitted that the foregoing arguments apply *mutatis mutandis* to claim 9, in that claim 9 recites a ceramic susceptor substrate

having minimal eccentricity such that a difference between maximum and minimum outer diameters is less than 0.8 percent of an average outer diameter of the substrate.

That is, the recitation "minimal eccentricity" should be taken to mean the *difference between any two diameters whatsoever*, as measured along the side of the susceptor substrate.

Applicants also note that their proprietary technology processes the ceramic susceptor not by sand blasting as in Ito et al., but rather by diamond grinding or diamond polishing, which is crucial because diametric irregularities arise in the substrate due to grains falling out of the material when it is being processed. Applicants further note that in order to achieve the special properties in a ceramic susceptor substrate as recited in claims 1 and 9, it is crucial that the ceramic material have an average grain size of no greater than 15  $\mu\text{m}$ .

Accordingly, Applicants respectfully submit that Ito et al. cannot be said to anticipate each and every limitation of claims 1 and 9, and that these independent claims should therefore be held allowable. Claims 1 and 9 being allowable, claims 2, 3, 5 and 10-13 as depending from these parent independent claims should also be allowable.

### ***Claim Rejections – 35 U.S.C. § 103***

Claims 4, 6, 7 and 8; Ito et al. '763 in view of Yoshida et al. '970 or Kawada et al. '260

Claims 4, 6, 7, and 8 stand rejected under U.S.C. § 103(a) as being unpatentable over the Ito et al. reference in view of U.S. Pat. No. 6,080,970 to Yoshida et al. or U.S. Pat. No. 5,665,260 to Kawada et al.

Applicants respectfully submit that for the reasons set forth above, independent claim 1 should be held allowable. Inasmuch as claims 4, 6, 7, and 8 depend either